

# STATEMENT OF CONSIDERATIONS

REQUEST BY UNITED TECHNOLOGIES CORPORATION, FOR AN ADVANCED  
WAIVER OF DOMESTIC AND FOREIGN PATENT RIGHTS UNDER COOPERATIVE  
AGREEMENT NO. DE-FC36-00GO10535; W(A)-00-019; CH-1034

The Petitioner, United Technologies Corporation (hereinafter "UTC"), has requested a waiver of domestic and foreign patent rights for all subject inventions arising from its participation under the above referenced cooperative agreement entitled "Hydrogen Storage in Polymer Dispersed Metal Hydrides". This cooperative agreement pertains to the development of a polymer/metal hydride system for hydrogen storage.

The objective of this cooperative agreement is to characterize the performance and mechanism of hydrogen storage in Polymer-Dispersed Metal Hydride (PDMH) materials. The primary performance gauge for use during this study will be gravimetric hydrogen-storage capacity. Specifically, this cooperative agreement is directed to the selection of polymers, metal hydrides, and mixing methods for the synthesis of PDMH materials. Characterization and analysis will be performed on synthesized PDMH samples. Data from the characterization and analysis will provide a basis for an overall system design and development of project plans for subsequent phases of the cooperative agreement.

It is anticipated that this project will be performed in three phases, over a period of approximately three years. Phase I of the cooperative agreement runs from May 1, 2000 to July 31, 2001 at a total cost of \$298,006.00, of which the Petitioner's cost share was \$59,601.00 or an approximate 20%-cost share. Participation by UTC in the subsequent phases is contingent upon review by DOE of the final report of the preceding phase. It is anticipated that this waiver will be applicable over all three phases of the contract, contingent upon approval of the contracting officer to UTC's involvement in each phase and provided that the Petitioner maintains, in aggregate, substantially the same cost sharing percentage over the course of the cooperative agreement (i.e., 20%). Application of this advanced waiver to subsequent phases is effective upon approval by field patent counsel.


As noted in its waiver petition, Petitioner, through its subsidiary, International Fuel Cells (hereinafter "IFC") has an established commercial position in fuel cell technology. Further, IFC has significant expertise in hydrogen fuel storage cell technology with more than 10 years of experience in the development of this technology. Exemplary of the Petitioner's expertise in the field is a patent in hydrogen storage technology and numerous technical articles published on the subject by its employees as shown under point 5 in the attached waiver petition. Considering Petitioner's technical expertise, established market position, and significant investment in this technology, including significant cost sharing in this cooperative agreement, it is reasonable to conclude that Petitioner will continue to further develop and commercialize the technology which may arise from this cooperative agreement.

Referring to item 10 of the waiver petition, granting this waiver is not anticipated to have any adverse impact on competition. There are several alternate technologies for hydrogen storage which include hydrogen storage by compressed gas systems and alternate metal hydride systems. The Petitioner will compete with these alternate technologies and while obtaining a position in the market, broaden the overall hydrogen storage system business. The


granting of this waiver and the underlying cooperative agreement can be expected to stimulate competition in the field by providing a viable alternate to existing hydrogen storage technologies.

The Petitioner has agreed that this waiver will be subject to the usual government license and march-in and U.S. preference provisions, equivalent to those set out in 35 U.S.C. 202-204, as well as appropriate background patent, and data licensing provisions, including contractor licensing. Further, Petitioner has agreed to the attached U.S. competitiveness provisions (clause (t)), wherein the Petitioner has agreed that products embodying any waived invention or produced through the use of any waived invention will be manufactured substantially in the United States unless Petitioner can show to the satisfaction of the DOE that it is not commercially feasible to do so, and in any event it will not license, assign or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements.

Considering the foregoing, it is believed that granting this waiver will provide Petitioner with the necessary incentive to invest its resources in the commercialization of the results of the cooperative agreement in a fashion which will make the above technology available to the public in the shortest practicable time. Therefore, upon evaluation of the waiver petition and in view of the objectives and considerations set forth in 10 CFR Part 784, all of which have been considered, it is recommended that the requested waiver be granted.

  
Thomas G. Anderson  
Assistant Chief Counsel  
Office of Intellectual  
Property Law

Date: 9/7/00

  
Mark LaMarre  
Patent Attorney  
Office of Intellectual  
Property Law

Date: 9/7/2000

Based upon the foregoing Statement of Considerations and representations in the attached waiver petition, it is determined that the interests of the United States and the general public will best be served by a waiver of patent rights of the scope described above, and therefore the waiver is granted. This waiver will not apply to any substantial modification or extension of the cooperative agreement, except as contemplated herein.

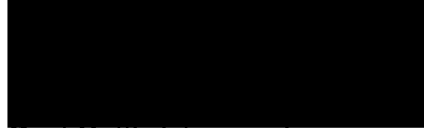
CONCURRENCE:



Neil Rossmeissl  
Hydrogen Research and Development  
Manager

Date: 17 October 2000

APPROVAL:



Paul Gottlieb  
Assistant General Counsel for  
Technology Transfer and Intellectual  
Property

Date: 11-9-00

WAIVER ACTION - ABSTRACT  
W(A)-00-019

REQUESTOR

United Technologies  
Corporation

COOPERATIVE AGREEMENT  
SCOPE OF WORK

Development of a polymer/metal  
hydride system for hydrogen  
storage for use with automobiles.  
Characterization of performance  
and mechanism of hydrogen  
storage in Polymer-Dispersed  
metal Hydride (PDMH) materials.

RATIONALE FOR DECISION

Significant experience in the  
metal hydride hydrogen storage  
systems - 20% cost sharing.

the Contractor under paragraph (b) of this clause) may be terminated at the discretion of the Secretary or his designee in whole or in part, if the request for waiver by the Contractor is found to contain false material statements or nondisclosure of material facts, and such were specifically relied upon by DOE in reaching the waiver determination. Prior to any such termination, the Contractor will be given written notice stating the extent of such proposed termination and the reasons therefor, and a period of 30 days, or such longer period as the Secretary or his designee shall determine for good cause shown in writing, to show cause why the waiver of rights should not be so terminated. Any waiver termination shall be subject to the Contractor's minimum license as provided in paragraph (e) of this clause.

(q) Atomic Energy.

No claim for pecuniary award or compensation under the provisions of the Atomic Energy Act of 1954, as amended, shall be asserted by the Contractor or its employees with respect to any invention or discovery made or conceived in the course of or under this contract.

(r) Publication.

It is recognized that during the course of work under this contract, the contractor or its employees may from time to time desire to release or publish information regarding scientific or technical developments conceived or first actually reduced to practice in the course of or under this contract. In order that public disclosure of such information will not adversely affect the patent interests of DOE or the contractor, approval for release of publication shall be secured from Patent Counsel prior to any such release or publication. In appropriate circumstances, and after consultation with the contractor, Patent Counsel may waive the right of prepublication review.

(s) Forfeiture of rights in unreported subject inventions.

(1) The contractor shall forfeit and assign to the Government, at the request of the Secretary of Energy or designee, all rights in any subject invention which the contractor fails to report to Patent Counsel within six months after the time the contractor:

- (i) Files or causes to be filed a United States or foreign patent application thereon; or
- (ii) Submits the final report required by paragraph (e)(2)(ii) of this clause, whichever is later.

(2) However, the Contractor shall not forfeit rights in a subject invention if, within the time specified in paragraph (m)(1) of this clause, the contractor:

- (i) Prepares a written decision based upon a review of the record that the invention was neither conceived nor first actually reduced to practice in the course of or under the contract and delivers the decision to Patent Counsel, with a copy to the Contracting Officer; or
- (ii) Contending that the subject invention is not a subject invention, the contractor nevertheless discloses the subject invention and all facts pertinent to this contention to the Patent Counsel, with a copy to the Contracting Officer, or
- (iii) Establishes that the failure to disclose did not result from the contractor's fault or negligence.

(3) Pending written assignment of the patent application and patents on a subject invention determined by the Contracting Officer to be forfeited (such determination to be a Final Decision under the Disputes clause of this contract), the contractor shall be deemed to hold the invention and the patent applications and patents pertaining thereto in trust for the Government. The forfeiture provision of this paragraph shall be in addition to and shall not supersede any other rights and remedies which the Government may have with respect to subject inventions.

(t) U. S. Competitiveness.

The Contractor agrees that any products embodying any waived invention or produced through the use of any waived invention will be manufactured substantially in the United States unless the Contractor can show to the satisfaction of the DOE that it is not commercially feasible to do so. In the event the DOE agrees to foreign manufacture, there will be a requirement that the Government's support of the technology be recognized in some appropriate manner, e.g., recoupment of the Government's investment, etc. The Contractor agrees that it will not license, assign or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements. Should the Contractor or other such entity receiving rights in the invention undergo a change in ownership amounting to a controlling interest, then the waiver, assignment, license, or other transfer of rights in the waived invention is suspended until approved in writing by the DOE.

(End of clause)